

WHAT IS CLAIMED IS:

1. A starter control apparatus, comprising:  
a conductive case for housing an exciting coil;  
a cap made of an insulating member and attached to close  
an open end of the case; and

a control circuit board on which a control circuit is  
mounted and which, together with the cap, is attached to the  
case through the cap and is fixed by a conductive attachment  
screw,

wherein an earth pattern is formed in a vicinity of an  
attachment hole of a one surface of the control circuit board,  
and

an earth system of the apparatus is properly used for  
both types of body earth and earth float by changing an  
attachment direction.

2. A starter control apparatus according to claim 1,  
wherein when the earth system is the body earth, the  
attachment direction is set so that the earth pattern provided  
in the vicinity of the attachment hole is positioned at a head  
side of the attachment screw.

3. A starter control apparatus according to claim 1,  
wherein when the earth system is the earth float, the  
attachment direction is set so that the earth pattern provided  
in the vicinity of the attachment hole is positioned at a side

of the cap.

4. A starter control apparatus according to claim 3, wherein an earth connection pattern is provided on the other surface of the control circuit board and at a portion other than the vicinity of the attachment hole, and when the earth system is the earth float, an earth terminal is led out via the earth connection pattern.

5. A starter control apparatus according to claim 1, wherein an attachment screw hole for the control circuit board and an attachment hole provided in the case and the cap are provided at different positions between a case where the earth system is the body earth and a case where the earth system is the earth float, and the respective positions are symmetrical positions with respect to an attachment position center line of the control circuit board.

6. A starter control apparatus according to claim 2, wherein an attachment screw hole for the control circuit board and an attachment hole provided in the case and the cap are provided at different positions between a case where the earth system is the body earth and a case where the earth system is the earth float, and the respective positions are symmetrical positions with respect to an attachment position center line of the control circuit board.

7. A starter control apparatus according to claim 3, wherein an attachment screw hole for the control circuit board

and an attachment hole provided in the case and the cap are provided at different positions between a case where the earth system is the body earth and a case where the earth system is the earth float, and the respective positions are symmetrical positions with respect to an attachment position center line of the control circuit board.

8. A starter control apparatus according to claim 4, wherein an attachment screw hole for the control circuit board and an attachment hole provided in the case and the cap are provided at different positions between a case where the earth system is the body earth and a case where the earth system is the earth float, and the respective positions are symmetrical positions with respect to an attachment position center line of the control circuit board.